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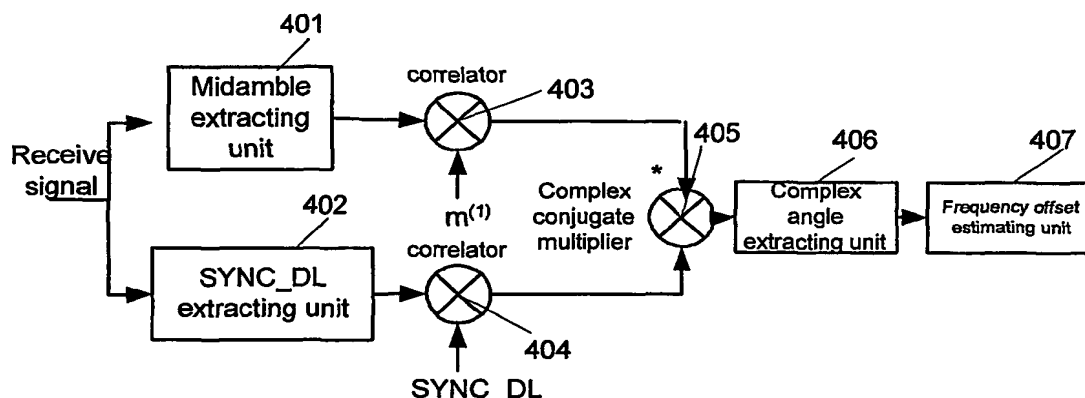
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(54) Title: METHOD AND APPARATUS OF FREQUENCY ESTIMATION FOR THE DOWNLINK OF TD-SCDMA SYSTEMS



(57) Abstract: A method of frequency estimation for the downlink of wireless communication systems, comprising steps of: determining, according to the received radio signals, the phase shift of the midamble and that of the downlink synchronization code of the radio signals respectively; calculating the phase shift difference between the midamble and the downlink synchronization code of the radio signals, according to the determined phase shift of the midamble and that of the downlink synchronization code; estimating the frequency offset of the radio signals, according to the phase shift difference between the midamble and the downlink synchronization code of the radio signals and the relationship between the expected midamble and the downlink synchronization code, e.g. the time interval between the midamble and the downlink synchronization code in communication protocols.



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